5(4) SOV/20-126-6-42/67

AUTHORS: Vdovin, Yu. A.; Levich, V. G., Corresponding Member, AS USSR; Myamlin, V. A.

TITLE: The Anodic Solution of Germanium (Anodnoye rastvoreniye germaniya)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 6, pp 1296-1299 (USSR)

ABSTRACT: The results of germanium investigations hitherto obtained (Refs 1-4) permit already the drawing of conclusions as to the reaction mentioned in the title, although there are still contradictions. It is certain that a saturation current occurs in the dissolution of electronic germanium, whereas it lacks in holes germanium. In currents that are considerably smaller than the saturation current of n-germanium in both cases a linear dependence of the potential upon the logarithm of the density of the anode current is observed. Holes in the electrode are necessary for the primary electrochemical reaction. A quantitative investigation of the dissolution process is attempted. The voltage drop in the electrolyte is neglected with the exception of the voltage drop in the Helmholtz double layer. The ratio between holes current and electronic current

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is r/m. After several simplifications the voltampere characteristic (21) is found by means of a system of equations (1) - (4) for dz/dt, d$\tilde{\lambda}$/dt, dy/dt, dp/dt and below the saturation current the logarithmic dependence of the potential upon the current is confirmed. The following is derived for the saturation current: $j_{sat} = -n_i^2 D_+ e^2 u_- \frac{\rho}{L}(1 + \frac{m}{r})$ (23)

(n_i = concentration of the electrons in the semiconductor, D_+ = diffusion coefficient of the holes, e = electron charge, u_- = mobility of the electrons, ρ = specific resistance, L_- = diffusion length of the non-basic charge carriers). Under consideration of the data given by J. B. Flynn (Ref 4) it holds that m/r = 3. Thus, the reaction on the surface requires 1 hole, and 3 electrons are liberated. The values deviating herefrom, found in other papers (Refs 2,10), are likely to be due to surface effects. There are 10 references, 4 of which are Soviet.

The Anodic Dissolution of Germanium

SOV/20-126-6-42/67

ASSOCIATION: Institut elektrokhimii Akademii nauk SSSR (Institute of Electrochemistry of the Academy of Sciences, USSR)

SUBMITTED: April 9, 1959

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VDOVIN, Yu.A.; LEVICH, V.G.; MYAMLIN, V.A.

Current - voltage characteristics of the electrolyte-semiconductor contact. Dokl.AN SSSR 124 no.2:350-353 Ja '59. (MIRA 12:1)

1. Chlen-korrespondent AN SSSR (for Levich). 2. Moskovskiy inzhenerno-fizicheskiy institut.
(Semiconductors) (Electrolytes)

VDOVICHENKO, Sergey Georgiyevich; CHIGRINETS, I.A., red.; SOBOLEVA, Ye.M., tekhn.red.

[Reference book for researchers] Sputnik izyskatelia; kratkoe spravochnoe posobie. Moskva, Gos.energ.izd-vo, 1959. 235 p. (MIRA 13:3)

(Engineering geology)

VDOVICHENKO, Vasiliy Terent'yevich [Vdovychenko, V.T.], kand.tekhn.nauk; MAKOVETSKIY, P.S. [Makovets'kyi, P.S.], kand.tekhn.nauk, glavnyy red.; KOVALEVSKIY, V.V. [Kovalevs'kyi, V.V.], red.

[Raw materials for the development of the chemical industry in the Ukraine] Syrovynna baza rozvytku khimichnoi promyslovosti na Ukraini. Kyiv, 1959. 46 p. (Tovarystvo dlia poshyrennia politychnykh i naukovykh znan' Ukrains'koi RSR. Ser.5, no.19) (MIRA 13:1)

(Ukraine--Chemical industries)

SOV/32-25-4-42/71

8(2)
AUTHORS: Yanus, R. I., Kubarev, V. V., Vdovin, Yu. A., Kolpakov, I. P.

TITLE: Automatic Apparatus for Sorting-out Plates of Electrotechnical Steel (Avtomaticheskiy apparat dlya rassortirovki listov elektrotekhnicheskoy stali)

PERIODICAL: Zavodskaya Laboratoriya, 1959, Vol 25, Nr 4, pp 480-481 (USSR)

ABSTRACT: The comrades G. G. Lyustiberg, P. I. Suruda, and G. G. Anoshenkov also took part in this investigation. An automatic device (Fig 1) for sorting out electrotechnical steel plates (1500 ×750 mm) was developed on the basis of an improved scheme of the coercimeter according to R. I. Yanus et al (Ref 2). The plate to be controlled closes a magnetic circuit, is magnetized by a selenoid, and closes a circuit of a certain intensity in the demagnetizing winding. If the field in the latter is equal to the coercive force of the plate, this plate is demagnetized, but if the field is stronger or weaker, the plate remains magnetized or is overmagnetized in the opposite direction. The amount and the sign of the residual magnetization of the plate is determined by means of two MKV-2 rectifiers. A scheme of the whole device for steel-plate sorting (Fig 2) with a description

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Automatic Apparatus for Sorting-out Plates of Electrotechnical Steel

of the operation is given. The efficiency of a model on the scale of 1:3 is indicated with 420 plates an hour. In the Verkh-Isetskiy metallurgicheskiy zavod (Verkh-Isetskiy Metallurgical Works), an industrial plant for plate sorting of this kind is designed for three types of steel with a capacity of 80 tons a day. There are 2 figures and 2 Soviet references.

ASSOCIATION: Ural'skiy institut chernykh metallov i Institut fiziki metallov Ural'skogo filiala Akademii nauk SSSR (Ural Institute of Ferrous Metals, and Institute of Metal Physics of the Ural Branch of the Academy of Sciences USSR)

5(4)
AUTHORS: Vdovin, Yu. A., Levich, V. G., Corresponding Member, AS USSR, Myamlin, V. A.

SOV/20-124-2-31/71

TITLE: The Volt-ampere Characteristic of the Contact Electrolyte-electron-semiconductor (Vol't-ampernaya kharakteristika kontakta elektrolit-elektronnyy poluprovodnik)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 2, pp 350-353 (USSR)

ABSTRACT: An oxidation-reduction reaction of the type $A^+ + e \rightleftharpoons A$ is assumed to occur during passage of the current. For reasons of greater simplicity it is assumed that the ion concentration on the surface of the reaction is sufficiently great and that its supply from the interior of the solution is not a limiting stage of the above-mentioned reaction. The potential drop in the electrolyte is neglected, which is justified if the solution contains an addition of an indifferent electrolyte of sufficiently high concentration. First, the basic equations are written down, which connect the amperage, the charge density, and the electric field strength in the semiconductor with one another: $j = eu[En + (kT/e)(dn/dx)]$ $(e > 0)$,

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$\text{div } \vec{E} = -(4\pi e/\varepsilon)(n - (n_\infty^2/n))$. Here u denotes electron mobility, n - their concentration, n_∞ - the concentration of the electrons within a domain that is sufficiently far from the contact. Such a selection of the charge density ρ corresponds to the weakly ionized donor-levels. The above-mentioned system of equations can also be written down in dimensionless form: $(dz/dt) - zy - \lambda = 0$, $(dy/dt) = z - (1/z)$. Contrary to what is the case in metal, concentration in a semiconductor may vary considerably. A generalized formula for the slowed-down discharge is written down. An auxiliary function is introduced for the solution of the dimensionless equation. First, the equation for this auxiliary function for low amperages is solved ($\lambda \ll 1$). An expression is written down for the entire voltage drop in a Helmholtz layer and in the semiconductor (after deduction of the ohmic voltage drop). After some further steps an expression is obtained for the volt-ampere characteristic. Next, the currents flowing in the locked direction are investigated. In this case the width of the united layer increases, and an expression for the

volt-ampere characteristic corresponding to this case is written down. In this case the dependence of the potential on amperage is essentially determined by Tafel's law. The authors then deal with the non-locked direction. The rectifier effect depends both on the electrochemical reaction taking place in the semiconductor and on the properties of the semiconductors. The discussed system has marked rectifier-properties under the conditions investigated. The results of this paper apply also if different reactions predominate at different directions of the current. There are 4 references, 3 of which are Soviet.

ASSOCIATION: Moskovskiy inzhenerno-fizicheskiy institut (Moscow Engineering Physics Institute)

SUBMITTED: September 27, 1958

AUTHORS: Bushev, A. S., Vdovin, Yu. A. SOV/56-34-6-45/51

TITLE: The Production of a Photostar and of a Fast Proton or Antiproton (Obrazovaniye fotozvezdy i bystrogo protona ili antiprotona)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol. 34, Nr 6, pp. 1652-1653 (USSR)

ABSTRACT: Yu. A. Vdovin investigated the production of a nuclear star through an intermediate pion pair by a γ-quantum. This paper investigates an analogous process: a γ-quantum with high energy produces a proton-antiproton pair, and one of the particles of the pair is absorbed by the same nucleus which produced the star. The other particles carry off an energy which has the same order of magnitude as the total energy of the star. The whole investigation is carried out for the ultrarelativistic region where only the small angles between the momenta of the γ-quantum and of the proton (or antiproton) flying away play an essential role. The strong interaction of the proton and of the antiproton with the nucleus are taken into account according to the optical model. The nucleus

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The Production of a Photostar and of a Fast Proton or Antiproton

is assumed to be an absolutely black body (with respect to the proton and antiproton) with a given radius. The nucleons may be described by the Dirac equation. The anomalous magnetic moment is not essential for so high energies. The authors assume, for instance, that the proton is absorbed, and that the antiproton flies away to infinity; the Dirac (Dirak) equation for this process is given explicitly. The wave function of the antiproton (which in the final state is a free particle) is given as a superposition of a plane wave and of the wave diffracted by the black nucleus. The authors obtain the cross section of the process by calculating the total proton flow. Then an expression is given for the differential cross section of this process. As in the scalar case, the total cross section does not depend on the energy of the γ-quantum and it is proportional to R/m. R denotes the radius which is perpendicular to $\overline{p}_1(\overline{p}_2)$ and goes through the center of the nucleus. $\overline{p}_1$ and $\overline{p}_2$, for their part, denote the momenta of the proton and of the antiproton. There are 4 references, all of which are Soviet.

SOV/56-34-6-45/51

The Production of a Photostar and of a Fast Proton or Antiproton

ASSOCIATION: Moskovskiy inzhenerno-fizicheskiy institut
(Moscow Engineering and Physics Institute)

SUBMITTED: March 27, 1958

Card 3/3

SOV/10-58-7-8/21

AUTHOR: Vdovin, Kh. A., Engineer

TITLE: Apparatus for inspecting and grading whole sheets of electrical steel
(Apparaty dlya kontrolya i sortirovki tselykh listov elektrotekhnicheskoy stali)

PERIODICAL: Vestnik Elektropromyshlennosti, 1958, Nr 7, pp 28-31 (USSR)

ABSTRACT: The Epstein apparatus for testing the magnetic properties of electrical steels, which has been used for 50 years, is the subject of general criticism. Its main disadvantages are enumerated. Nowadays there is a tendency to separate absolute measurements from general inspection, and in many countries attempts are being made to develop apparatus for inspecting and grading whole sheets of transformer steel. By grading sheets into different qualities, economies of material could be achieved. The article then describes a number of pieces of equipment that have been developed for this purpose namely those of F. Koppelman, Germany, 1951;

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SOV/110-58-7-8/21

Apparatus for inspecting and grading whole sheets of electrical steel

Ikeda and Narita, Japan, 1955; W. Krug, Germany, 1956 (see Fig 2); Siewierski, Poland, 1957; Gernhardt and Lange, Germany, 1956; and Edmundson, England, 1955 (see Fig 4). The instruments are all briefly described without special comment. There are 4 figures, and 10 references, 2 of which are Soviet, 1 Polish, 6 German and 1 English.

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1. Steel--Testing equipment 2. Steel--Magnetic properties 3. Electrical equipment--Performance

SOV/20-120-3-33/67

AUTHOR: Vdovin, Yu. A.

TITLE: The Theory of Faraday Rectification (Teoriya faradeyevskogo vypryamleniya)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol. 120, Nr 3, pp. 554-557 (USSR)

ABSTRACT: There are two kinds of passage of an alternating current through the surface of an electrode. One of them is connected with the charging and discharging of the double layer on the surface of the electrode. This phenomenon is analogous to the passage of an alternating current through a condenser. The second kind, (which furnishes the real Faraday (Faradey) component of alternating current), is directly connected with the electrochemical oxidation-reduction reaction on the surface of the electrode. At not too high frequencies and not too low concentrations of the reacting particles it is possible to neglect the phenomena in the double layer and to confine oneself to investigating the Faraday (Faradey) component of the alternating current. The alternating current $i = I \cos \omega t$ is assumed to pass through an electrode having

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The Theory of Faraday Rectification

a surface of A cm^2. The passage of the current is condensed with an oxidation-reduction-reaction $Ox + ne \rightleftarrows Rd$ on the electrode. Ions of both the oxidizing agent and of the reducing agent are supposed to be in the solution. The system with Fe^{3+}, Fe^{2+}/Pt electrodes is mentioned as an example. A condition for the equilibrium in such a system is given. The periodic function φ (change of the potential of the electrode during the passage of an alternating current) is here developed into a Fourier (Fur'ye) series. In this case the first harmonic may be considered sufficient because higher terms supply only minor corrections. In this way $\varphi = \psi + V \cos(\omega t + \vartheta)$ is obtained. Next, the connection between the amplitude V of the alternating voltage and the amperage I, the phase shift ϑ of the alternating voltage, and the dependence of the constant component ψ on the alternating voltage are determined. The amount of ψ depends on a certain coefficient. The potential ψ is shifted also if the solution contains only ions of the oxidizing agent. As an example a metal electron may serve, which is immerged in a solution containing the ions of this metal. In this case there is a surplus of reducing agent, and the velocity of oxidation does not depend on the concentration of the reducing

agent. In conclusion, the author thanks A. N. Frumkin, Member, Academy of Sciences, USSR, for directing his attention to the problem investigated, and he also expresses his gratitude to Professor V. G. Levich for a useful discussion of the problem. There are 10 references, 1 of which is Soviet.

PRESENTED: January 15, 1958, by A. N. Frumkin, Member, Academy of Sciences, USSR

SUBMITTED: January 10, 1958

1. Electrodes--Electrochemistry 2. Electrodes--Surface properties
3. Alternating current--Theory

VDOVIN, Yu. A.

Theory of Faraday's rectification. Dokl. AN SSSR 120 no. 3:554-557 My '58. (MIRA 11:7)

1. Predstavleno akademikom A.N.Frumkinym.
(Electric current rectifiers)
(Electrochemistry)

VDOVIN, Yu. A.

USSR/Nuclear Physics - Elementary Particles. C-3

Abs Jour : Ref Zhur - Fizika, No 1, 1958, 414

Author : Vdovin, Yu.A.
Inst : -
Title : Formation of Proton-Antiproton Pairs by Gamma Quanta of Large Energy.

Orig Pub : Zh. eksperim i teor. fiziki, 1957, 32, No 3, 542-546

Abstract : The author calculates the effective cross section for the production of proton-antigroton pairs by high energy gamma-quanta on nuclei, taking into account the strong interaction between the nucleons and the nucleus. The calculation is semi-phenomenological. To calculate the effective cross section, it is enough to know the asymptotic expression for the wave function of each nucleon. First these asymptotic expressions were found under the assumption that the nucleus is "absolutely black" sphere of radius R_1 and R_2 relative to the proton and antiproton respectively.

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L 23744-66 EWT(1)/ T IJP(c)
ACC NR: AP6007221 SOURCE CODE: UR/0056/66/050/002/0395/0403

AUTHOR: Vdovin, Yu. A.

ORG: Moscow Engineering-Physics Institute (Moskovskiy inzhenerno-fizicheskiy institut)

TITLE: Relaxation of photon density in a resonant medium

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 50, no. 2, 1966, 395-403

TOPIC TAGS: relaxation process, photon, molecular spectrum, quantum resonance phenomenon, Doppler effect, Stark effect, dispersion equation, kinetic equation, collision integral

ABSTRACT: This is a continuation of an earlier quantum-theoretical analysis by the author (with V. M. Galitskiy, ZhETF v. 48, 1352, 1965) devoted to relaxation of a system of resonant molecules. In the present paper account is taken of the dispersion of the energy levels of the molecules due to processes such as the Doppler effect, the Stark effect, and others. The molecules of the medium are assumed

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ACC NR: AP6007221

to be randomly distributed. From an analysis of the time variation of the velocity distribution of the density of photons and with a given wave vector it is seen that the dispersion of the levels greatly influences the time development of the process. The dispersion of the molecular levels also influences the distribution of the photons with respect to the transition frequencies. The corresponding kinetic equations are formulated and it is shown that they are characterized by a collision term which is integral with respect to the time. This form of the collision term is caused by the photon energy indeterminacy resulting from the relaxation process. Orig. art. has: 24 formulas

SUB CODE: 20/ SUBM DATE: 29Jun65/ ORIG REF: 006/ OTH REF: 001

Card 2/2

VDOVIN, Yu.M.

Cenozoic volcanism of the eastern slope of the northern Sikhote-Alin' Range. Izv. vys. ucheb. zav.; geol. i razv. 1 no.4:32-46 Ap '58. (MIRA 11:12)

1.Moskovskiy geologorazvedochnyy institut imeni S. Ordzhonikidze, Kafedra istoricheskoy geologii.
(Sikhote-Alin' Range--Volcanoes)

VDOVINA, A.I.

Effect of various soil differences on some morphological and anatomical features of the pea leaf. Uch. zap. Kaz. un. 117 no.9:239-242 '57. (MIRA 13:1)

1.Kazanskiy gosudarstvennyy universitet im. V.I. Ul'yanova-Lenina. Kafedra geobotaniki.
(Peas)

TARCHEVSKIY, I.A.; VDOVINA, A.I.; GAYNUTDINOVA, N.A.

Formation of photosynthates in shade-tolerant plants under the forest canopy and in clearings. Bot. zhur. 46 no.9:1325-1328 S '61. (MIRA 14:9)

1. Kazanskiy gosudarstvennyy universitet im. V.I.Ul'yanova-Lenina.
(Forest ecology) (Photosynthesis)

TARCHEVSKIY, I.A.; KURMAYEVA, S.A.; VDOVINA, A.I.

Change in the trend of photosynthesis in plants transplanted under the canopy of the forest. Bot. zhur. 47 no.9:1366-1369 S '62. (MIRA 16:5)

1. Kazanskiy gosudarstvennyy universitet.
(Photosynthesis) (Forest ecology)

VDOVINA, E.V.

Some conditions for the existence of divergent integrals of the equation $\ddot{y} = f(y, \dot{y})$. Izv. vys.ucheb. zav.; mat. no.3:11-21 '62. (MIRA 15:9)

1. Ural'skiy gosudarstvennyy universitet imeni A.M. Gor'kogo.
(Differential equations)
(Integrals)

S/864/60/000/000/002/005
E032/E314

21.4.00

AUTHOR: Vdovina, E.V.

TITLE: On the motion of a mass point on a closed curve

SOURCE: Nauchnaya konferentsiya po teoreticheskim i prikladnym voprosam matematiki i mekhaniki, Tomsk, 1960. Doklady. Tomsk, 1960. 92 - 93

TEXT: This paper is concerned with the equation
$\ddot{x} = f(x) - R(x, \dot{x}) = f(x, \dot{x})$ or the equivalent system

$$\dot{x} = y, \quad \dot{y} = f(x) - R(x, y) = f(x, y) \qquad (1)$$

which describe the motion of a point on a closed curve under the action of time-independent forces. The function $f(x, \dot{x})$ and its derivatives are assumed to be continuous for all x and $\dot{x}$ and periodic in x with a period of 2π. Moreover, $f(x, \dot{x})$ satisfies the condition

$$\left.\begin{array}{l} \lim\limits_{\dot{x} \to +\infty} f(x, \dot{x}) < 0, \quad \lim\limits_{\dot{x} \to -\infty} f(x, \dot{x}) > 0 \\ \int_0^{2\pi} f(x)dx \geq 0 \end{array}\right\} \qquad (*).$$

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The analysis is carried out in the phase space which coincides with the surface of a right circular cylinder. The equation of the phase trajectories is then of the form

$$\frac{dy}{dx} = \frac{f(x) - R(x, y)}{y} = \frac{f(x, y)}{y} \qquad (2) .$$

It is assumed that the function $f(x)$ has a finite number $(2s)$ of simple roots per period. The following theorems are then proved. 1) For a function $f(\alpha, y)$ satisfying (*), the equation given by (2) can have three and only three possibilities as far as the existence of a periodic solution is concerned, namely: a) a periodic solution exists; b) an improper periodic solution exists and c) there is no periodic solution. 2) In order that the equation $\ddot{x} + f(x) - R(x, \dot{x})$ should have at least one stable limit cycle, it is sufficient that one of the following conditions be satisfied:

$$x_{2r+1} < x(R_{2k}^{III}) < x(S_{2k}^{III}) \qquad (4)$$

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On the motion of ....

$$x(R'_{2k}) < x(S'_{2k}) < \eta_{2i+} \tag{5}$$

$$\left.\begin{aligned} R'''_{2r}(x_{2i-1}) &< R'_{2r}(x_{2\ell-1}) \\ S'_{2k}(\eta_{2\ell-1}) &< S'''_{2r}(\eta_{2\ell-1}) \end{aligned}\right\} \tag{6}$$

where $x(R'''_{2k})$, $x(R'''_{2k})$ are the abscissae of the minimum positive roots of $R'''_{2k}(x)$, $S'''_{2k}(x)$, and $x(R'_{2k})$, $x(S'_{2k})$ are the abscissae of the maximum negative roots of $R'_{2k}(x)$, $S'_{2k}(x)$, and $R'''_{2k}(x)$ is an integral curve lying in the upper half-plane and leaving a saddle-type singularity of a system corresponding to Eq. (3) and defined in the upper half-plane. $S'''_{2k}(x)$ is the analogous curve for the lower half-plane.

ASSOCIATION: Ural'skiy universitet (Ural University)

Card 3/3

BARBASHIN, Ye.A.; VDOVINA, E.V.

Conditions of singularity of limit cycles. Izv. vys. ucheb. zav.; mat. no. 3:43-47 '60. (MIRA 13:12)

1. Ural'skiy filial AN SSSR, Ural'skiy gosudarstvennyy universitet imeni A.M. Gor'kogo. (Differential equations)

S/140/62/000/003/002/007
0111/0222

AUTHOR: Vdovina, E. V.

TITLE: Some conditions for the existence of diverging integrals of the equation $\ddot{y} = f(y, \dot{y})$

PERIODICAL: Vysshiye uchebnyye zavedeniya. Izvestiya. Matematika, no. 3, 1962, 11-21

TEXT: The paper is concerned with the qualitative investigation of the system

$$\dot{y} = p, \qquad (7)$$
$$\dot{p} = f(y) - R(y,p)$$

where $f(y) = f(y, 0)$ and $R(y,p) = f(y) - f(y, p)$, and constitutes a development of the investigations of L. Amerio (Studio asintotico del moto di un punto una linea chiusa, per azione di forze indipendenti dal tempo. Ann. Scula norm. super. Pisa, III, 19-57, 1950). It is supposed that (A) $f(y,p)$, f'_y, f'_p are continuous; $f(y+2\pi,p) = f(y,p)$; $f(y,p)$ is decreasing in y and that for every y: $\lim_{p \to +\infty} f(y,p) < 0$, $\lim_{p \to -\infty} f(y,p) > 0$.

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Furthermore, it is assumed that f(y) possesses a finite number of only simple zeros on the period. The cylindrical phase image of the system (7) is investigated by considering the separatrices belonging to the saddle points of the system with the aid of the so-called Lyapunov curves

$$p^2 = 2\int_{y_{2k}}^{y} f(y)\,dy\,, \qquad (11)$$

where y_{2k} is a saddle zero of f(y). Special attention is paid to those periodic solutions enclosing the phase cylinder. Conditions for the existence or nonexistence of such periodic solutions are given; e. g. if the system (7) satisfies the conditions (A) and

$$\mu = \frac{1}{2\pi}\int_{0}^{2\pi} f(y)dy \geq 0 \qquad (12)$$

and if for any k it holds

Some conditions for the existence ...

$$\left[\sup \phi(y)\right]^2 < 2 \int_{y_{2k}}^{y_{2k-1}} f(y)\, dy \qquad (19)$$

or

$$2 \int_{y_{2k}}^{y_{2k-1}} f(y, p_o)\, dy > \left[\sup \phi(y)\right]^2 \qquad (23)$$

then the above mentioned periodic solutions do not exist. Here $p = \phi(y)$ is the unique solution of $f(y,p) = 0$, y_{2k} -- saddle point, y_{2k-1} -- node or vortex in the sequence $\{y_k\}$ ($k = 0, \pm 1, \pm 2, \ldots$) of the zeros of $f(y)$ on $(-\infty, \infty)$.

The method of proof is essentially based on the method of V.A. Tabuyeva (K voprosu o forme oblasti prityazheniya nulevogo resheniya

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S/140/62/000/003/002/007
C111/C222

Some conditions for the existence . . .

differentsial'nogo uravneniya [On the question of the form of the domain of attraction of the zero solution of a differential equation], Izv. vuzov, Matem., no. 4(5), 1958), There are 4 figures.

ASSOCIATION: Ural'skiy gosudarstvennyy universitet im. A.M. Gor'kogo (Ural State University im. A. M. Gor'kiy)

SUBMITTED: June 8, 1959

Card 4/4

VDOVINA, E.V.

Motion of a point along a closed curve in the presence of a propellent force. Mat.zap.Ural.mat.ob-va UrGu 3 no.2:9-16 '62.

(MIRA 19:1)

VDOVINA, L.; NAUMOV, G.; FILIMONOV, P.; TURBIN, I.

Readers suggest. Fin. SSSR 37 no.1:84 Ja '63. (MIRA 16:2)

1. Nachal'nik byudzhetnogo otdela Vinnitskogo oblastnogo finansovogo otdela (for Vdovina). 2. TSentral'nyy rayonnyy finansovyy otdel Voronezha (for Naumov, Filimonov, Turbin).
(Education—Finance) (Taxation)

L 23865-66 EWT(m)/EWP(j)/T/ETC(m)-6 IJP(c) WW/RM

ACC NR: AP6014415 SOURCE CODE: UR/0062/66/000/004/0772/0772

35
34
B

AUTHOR: Korshak, V. V.; Izyneyev, A. A.; Vdovina, L. I.

ORG: Institute of Heteroorganic Compounds, Academy of Sciences SSSR (Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR); Buryat Scientific Research Institute for Comprehensive Studies, Siberian Department of the Academy of Sciences SSSR (Buryatskiy kompleksnyy nauchno-issledovatel'skiy institut Sibirskogo Otdeleniya Akademii nauk SSSR)

TITLE: Synthesis of new polybenzimidazoles

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 4, 1966, 772

TOPIC TAGS: heat resistant polymer, polybenzimidazole

ABSTRACT: New polybenzimidazoles have been synthesized which exhibit both high thermal stability and solubility in a wide range of organic solvents. It is noted that polybenzimidazoles prepared heretofore were soluble in a limited number of solvents only. The new polybenzimidazoles were prepared from bis(3,4-diaminophenyl) ether and various diphenyl alkyl- or aryl-dicarboxylates in vacuum (10^{-1} mm Hg) at 260—320C. The polymers had the general formula

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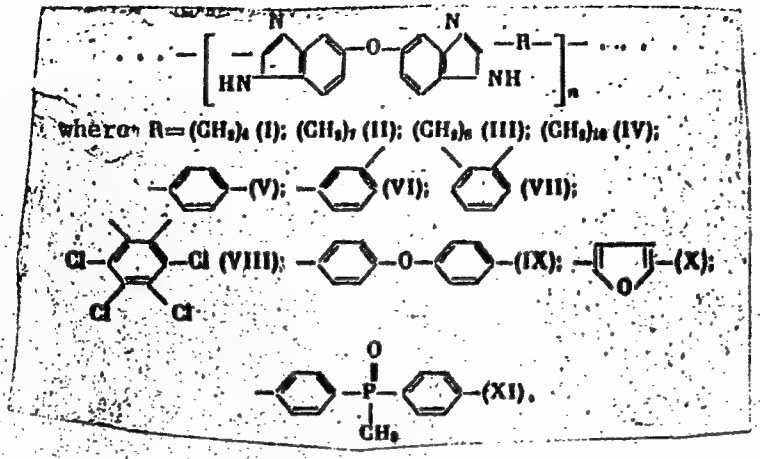
Card 1/2 UDC: 542.91+541.16+547.7

L 23865-66
ACC NR: AP6014415



Weight loss began at 380—400C for aliphatic R (polymers I to IV) and 480—500C for aromatic R (polymers V to XI). The polymers were soluble in formic acid, dimethyl sulfoxide, dimethylformamide, and dimethylacetamide. Strong elastic films were produced from 1% solutions in concentrated formic acid. [SM]

SUB CODE: 11/ SUBM DATE: 14Jan66/ ORIG REF: 003/ OTH REF: 003/ ATD PRESS: 4246

Card 2/2 dda

Country : USSR
Category: Cultivated Plants Potatoes. Vegetables. Melons. M

Abs Jour: RZhBiol., No 11, 1958, No 48956

Author : Vdovina, L.I.
Inst : Sakhalin Affiliate AS USSR
Title : Studies of Tomato Varieties in a Hothouse in the Southern Part of Sakhalin.

Orig Pub: Soobshch. Sakhalinskogo fil. AN SSSR, 1956, vyp. 3, 35-41.

Abstract: It was found that the best varieties for growing in the frame hothouses during the spring-summer period are the following: Teplichnyy VIR, Alisa 639 and the Early Leningradskiy. For the fall-winter cultivation the best varieties were: Ural'skiy, Teplichnyy

Card : 1/2

M-70

Country : USSR
Category: Cultivated Plants. Potatoes. Vegetables. Melons. M

VIR and Osennyy. In hothouses with small space between the ground and the glass, it is possible to cultivate the Early Gruntovyy and the Krayniy Sever varieties. With two-stem bushes it is permissible to leave on the plants in hothouses, up to 5 clusters on Alisa 639 and the Early Leningradskiy varieties and up to 8 clusters on the Teplichnyy VIR and Ural'skiy varieties. The Early Gruntovyy and Krayniy Sever varieties form three stems, while leaving up to 12 clusters on them. -- O.A. Gorbunova

Card : 2/2

VDOVINA, L. I.

Results of studying tomato varieties in a greenhouse in southern Sakhalin. Soob.Sakhal.fil. AN SSSR no.3:35-41 '56. (MLRA 10:7)
(Sakhalin--Tomatoes--Varieties) (Greenhouses)

L 36369-66 EWP(j)/EWT(m)/T RM

ACC NR: AP6009873 (A) SOURCE CODE: UR/0413/66/000/004/0068/0068

INVENTOR: Gudz', V. N.; Vdovina, L. I. 33

ORG: none B

TITLE: Preparation of a nitrogen-containing polymer. Class 39, No. 178981 15

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 4, 1966, 68

TOPIC TAGS: polymer, nitrogen polymer, polycondensation, ammonia, acetaldehyde

ABSTRACT: An Author Certificate has been issued describing a method of making a nitrogen-containing polymer by polycondensation of acetaldehyde and ammonia. To increase the molecular weight of the polymer, ammonia gas is used in the presence of acetic acid.

[LD]

SUB CODE: 07,11/ SUBM DATE: 17Aug64

Card 1/1 UDC: 678.652.002.2

SELUYANOVA, Ye.; SHKATOV, Yu.; VDOVINA, V.

Improve the maintenance of apartment houses daily. Zhil.-kom. khoz. 11 no. 1:15 '61. (MIRA 14:2)

1. Nachal'nik zhilishchnoekspluatatsionnoy kontory No. 12 Oktyabr'skogo rayona Moskvy (for Seluyanova). 2. Glavnyy inzhener remontno-stroitel'nogo tresta g. Lipetska (for Shkatov). 3. Glavnyy inzhener zhilishchnogo upravleniya g. Voronezha (for Vdovina).
(Apartment houses--Maintenance and repair)

LIVKINA, Ye.G., doktor meditsinskikh nauk; MALYSHEV, F.S., kandidat meditsinskikh nauk; VDOVINA, N.V. (Khabarovsk)

Primary gonococcal sensitivity to antibiotics and sulfanilamides as compared with chemotherapeutic results in men. Vest.ven. i derm. 30 no.5:45-49 S-O '56. (MLRA 9:12)

(GONORRHEA, ther.
antibiotics & sulfanilamide in males, determ. of gonococcal sensitivity)
(ANTIBIOTICS, ther. use
gonorrhea, with sulfanilamide in males, determ. of gonococcal sensitivity)
(SULFANILAMIDE, ther. use
gonorrhea, with antibiotics, in males, determ. of gonococcal sensitivity)

MAYMIND, V.I.; YENISHERLOVA, O.M.; YERMOLAYEV, K.M.; VDOVINA, P.G.; GALEGOV, G.A.; SHEMYAKIN, M.M.

Compounds with tagged C^{14} and N^{15} atoms. Part 9: Synthesis of ω-N^{15}-amino acids. Zhur. ob. khim. 28 no. 8:2223-2228 Ag '58. (MIRA 11:10)

1. Institut biologicheskoy i meditsinskoy khimii AMN SSSR.
(Amino acids)
(Nitrogen--Isotopes)

USSR/Organic Chemistry. Synthetic Organic Chemistry. E-2

Abs Jour: Ref Zhur-Khimiya, No 6, 1957, 19283.

Author : Maymind V.I., Tokaryev B.V., Gomes E., Vdovina P.G., Yermolayev K.M., Shemyakin M.M.,

Inst :

Title : Investigation in the Field of Compounds, marked C14 and N15 IV. Synthesis "of Key" Compounds.

Orig Pub: Zh. obshch. khimiyi, 1956, 26, No 7, 1962-1967.

Abstract: Described are methods of synthesis of phthalimide-N^{15} (I); of potassium salt of phthalimide-N15(II); $HN15O_3$ (III); HC14N; salts of III-$HN15O_2$ and HC 14N. 10-150 moles $N15H_3$ (from 0.1 mole $N15H_4NO_3$) are passed for 3 hours into a suspension of 0.105 mole of phthalic acid in 400 cc water the solution is evaporated, the remainder is heated (200°) and sublimated (290-300°); then it is ground with water and neutralized with a 5% solution soda, yield is I, 98-

Card : 1/3

USSR/Organic Chemistry. Synthetic Organic Chemistry. E-2

Abs Jour: Ref Zhur-Khimiya, No 6, 1957, 19283.

KC^{14}N the vapors of HC^{14}N are passed through C_2Cl_2 at 40° absorbed by anhydr. alcohol at -25°, and precipitated with a solution of C_2H_5OK or spontaneously absorb HC^{14}N with solution of an alcoholate. The previous report see RZhKhim, 1956, 9691.

Card : 3/3

IVANOVA, A.; VDOVINA, R.; VORONOVA, M.

Thoughts, suggestions and wishes. Sov.profsoiuzy 19 no.5:18-19 Mr '63. (MIRA 16:2)

1. Organizator profsoyuznoy gruppy tsekha pryadil'nykh mashin pryadil'noy fabriki No.2 Orekhovskogo ordena Lenina khlopchatobumazhnogo kombinata imeni K.I. Nikolayevoy (for Ivanova). 2. Organizator profsoyuznoy gruppy vorsoreznogo tsekha otbel'no-krasil'noy fabriki Orekhovskogo ordena Lenina khlopchatobumazhnogo kombinata imeni K.I. Nikolayevoy (for Vdovina). 3. Organizator profsoyuznoy gruppy 3-go tsekha tkatskoy fabriki No.1 Orekhovskogo ordena Lenina khlopchatobumazhnogo kombinata imeni K.I. Nikolayevoy (for Voronova).

(Orekhovo-Zuyevo—Cotton manufacture)
(Trade unions—Officers)

Cf. VDOVINA R.G.

Amino ketones of the tetrahydronaphthalene series. Synthesis of 1-hydroxy-4-(aminoacetyl)-5,6,7,8-tetrahydronaphthalenes. S. I. Sergeevskaya and R. G. Vdovina (All-Union Chem. Pharm. Inst., Moscow). *Zhur. Obshchei Khim.* (J. Gen. Chem.) 21, 859-96 (1951).—*1-Hydroxy-4-acetyl-5,6,7,8-tetrahydronaphthalene* (10 g.) in 50 ml. ice-cooled dry pyridine with 10 ml. BzCl gave after 6 hrs. 6% *1-benzoate*, m. 115-16° (from EtOH); this (10 g.) in 50 ml. $CHCl_3$ was brominated with 1.8 ml. Br, warmed to 25-30° briefly, then evapd. in vacuo, and aerated to remove the excess Br and HBr, yielding 92.5% *1-benzoyl-4-(bromoacetyl)-5,6,7,8-tetrahydronaphthalene* (I), m. 132-3° (decompn. from CCl_4). The structure is proved by condensation with $CH_2(CO_2Et)_2$ (Na deriv.) and hydrolysis with 10% aq. alc. KOH, yielding (5,6,7,8-tetrahydro-1-hydroxy-4-naphthoyl)-malonic acid, m. 157-9°, which heated in pyridine to 120-5° gave authentic *β-(5,6,7,8-tetrahydro-1-hydroxy-4-naphthoyl)propionic acid*, m. 190-1° (*Et ester*, m. 121-3°). I (6 g.) in 27 ml. C_6H_6 stirred 3 hrs. with 6 g. $PhCH_2NHMe.HBr$, m. then let stand overnight, gave 95% $PhCH_2NHMe.HBr$, m. 185-6°, while the filtrate on evapn. and trituration with abs. Et_2O then treatment with dry HCl, gave 32% *1-benzoyl-4-(benzylmethylaminoacetyl)-5,6,7,8-tetrahydronaphthalene-HCl*, m. 192-4° (from MeCO-MeOH); *picrate*, yellow, m. 137-8° (from EtOH). Refluxing 10-16 hrs. with 30% MeOH-aq. HCl gave 80% *free 1-HO analog*, decomp. 190-201.5° (from EtOH), while the Bz deriv. with H over Pd-C in MeOH gave 50% *1-benzoyl-4-(methylaminoacetyl)-5,6,7,8-tetrahydronaphthalene-HCl* (II), decomp. 222-5°. (from EtOH); similar hydrogenolysis of the HO deriv. gave 70% *1-hydroxy-4-(methylaminoacetyl)-5,6,7,8-tetrahydronaphthalene-HCl* (III), decomp. 222-3.5° (from EtOH), also formed from the Bz deriv by refluxing 10-12 hrs. with 30% aq. MeOH-HCl. I (3 g.) in 20 ml. dry C_6H_6 mixed with 0.5 g. MeNH₂ in 3 hrs. gave *1-benzoyl-4-(methylaminoacetyl)-5,6,7,8-tetrahydronaphthalene as a salt*, m. 225-5°, identical with II. Refluxing this with 20% aq. EtOH-HCl 12 hrs. gave III, m. 234-6°. Similar condensation of I with $PhCH_2NH_2$ gave 34.5% *benzylamino analog*, isolated as the *HCl salt*, decomp. 194.5-6.0 (from abs. EtOH); hydrolyzed with aq. MeOH-HCl to 43% *1-hydroxy-4-(benzylaminoacetyl)-5,6,7,8-tetrahydronaphthalene-HCl*, decomp. 201.5-3.0° (from abs. EtOH). Its *Bz deriv. HCl salt* (1 g.) with H in abs. MeOH over 10% Pd-C at 25-7° gave *1-benzoyl-4-(aminoacetyl)-5,6,7,8-tetrahydronaphthalene-HCl*, m. 202.5-4.0° (from MeCO-MeOH), whose aq. soln. shows rapid hydrolysis; similar hydrogenolysis of the 1-HO analog gave *1-hydroxy-4-(aminoacetyl)-5,6,7,8-tetrahydronaphthalene-HCl*, decomp. 235-7° (from EtOH-Et_2O). Condensation of I with Et_2NH in C_6H_6 in 4.5 hrs. gave 80% crude *1-benzoyl-4-(diethylaminoacetyl)-5,6,7,8-tetrahydronaphthalene-HCl*, decomp. 181.5-3.5° (from abs. EtOH); 42% pure, *picrate*, m. 122-3° whose aq. solns. readily hydrolyze; *picrate*, m. 122-3° (from EtOH-Et_2O); hydrolysis with aq. MeOH-HCl for 12 hrs. gave 60% *1-hydroxy-4-(diethylaminoacetyl)-5,6,7,8-tetrahydronaphthalene-HCl*, decomp. 200-5° (from MeOH-MeCO).

C. N. Kondapol

CA

10

Amino ketones of the tetrahydronaphthalene series. Synthesis of 1-hydroxy-4-(aminoacetyl)-5,6,7,8-tetrahydronaphthalenes. S. I. Sergievskaya and R. G. Vdovina. *J. Gen. Chem. U.S.S.R.* 21, 975–83(1951)(Engl. translation).—See *C.A.* 46, 957*d*. B. R.

CA

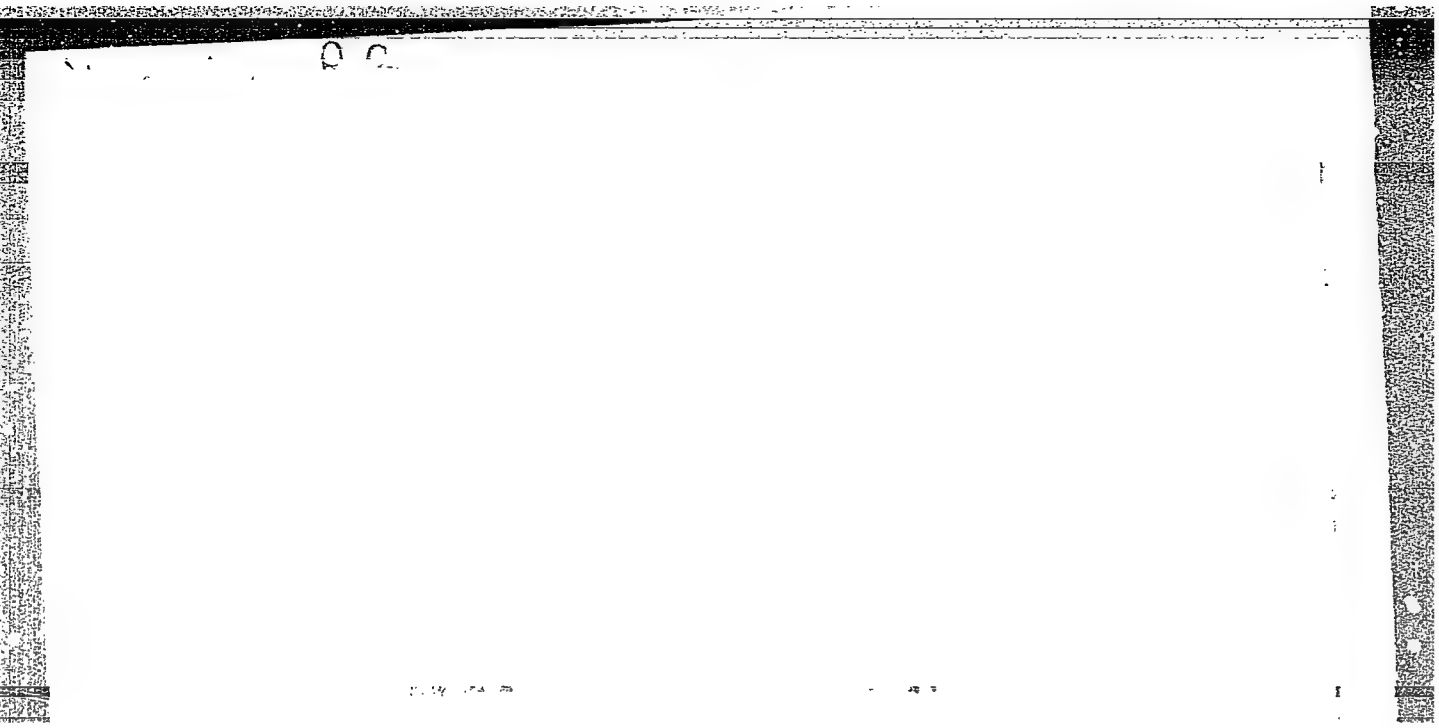
Cis-trans isomerism in the series of oxazolones (azlactones). S. I. Lur'e and R. G. Vilovjna. *Doklady Akad. Nauk S.S.S.R.* 79, 81–3(1951).—Contrary to Boekelheide and Schramm (*C.A.* 43, 7427*a*), condensation of MeCOEt with hippuric acid yields not a substance, m. 138°, but a red-yellow oil, $C_{14}H_{15}O_3N$ (I), which solidifies and m. 33–7°. Treatment with alkali yielded the acid, $C_{14}H_{17}O_3N$, while $PhNH_2$ gave the anilide, $C_{20}H_{22}O_2N_2$, of this acid. Reduction of I with H and a Ni catalyst gave isoleucine. Hence, I is *2-phenyl-4-(1-methyl-1-propen-1-yl)-5-oxazolone*; the material described above is a mixt. of 2 geometric isomers, sepd. by sapon. with a deficient amt. of alkali. Part of the oil reacts rapidly and acidification of the soln. yields *α-benzamido-β-methyl-β-ethylacrylic acid*, which, heated with Ac_2O yields the I, m. 52–4°, named *isomer* I (Ia). Crystn. of the unsapond. residue from 70% EtOH gave the 2nd *isomer* (Ib), m. 63–4°. While the absorption spectra of Ia and Ib are identical as to shape, Ia shows more intense absorption bands. Sapon. of Ia and Ib gives 2 acids, m. 223–4° and 200–4°, which yield the *Me esters*, m. 185–6° and 138–9°, and *piperidides*, m. 141–3° and 178–9°, resp. The esters can be prepd. directly from Ia and Ib with MeOH and a trace of MeONa. $PhNH_2$ yields but 1 *anilide*, m. 254–5°, possibly because the ability of the geometric isomers to isomerize under the influence of org. bases.

G. M. Kosolapoff

Inst. Biol. & Med. Chem.,
AMS USSR,

LUR'YE, S.I.; VDOVINA, R.G.

Amino acids. III. Cis-trans isomerism in the oxazolone (azlactone) series. Zhur. Obshchey Khim. 22, 1883-7 '52. (MLRA 5:11)
(CA 47 no.22:12353 '53)



APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001859210020-3"

SHEMYAKIN, M.M.; SHCHUKINA, L.A.; VINOGRADOVA, Ye.I.; KOLOSOV, M.N.; VDOVINA, R.G.; KARAPETYAN, M.G.; RODIONOV, V.Ya.; RAVDEL', G.A.; SHVETSOV, Yu.B., BAMDAS, E.M.; CHAMAN, Ye.S.; YERMOLAYEV, K.M.; SEMKIN, Ye.P.

Research data on sarkomycin and its analogues. Part 1: Synthesis of dihydrosarkomycin and its antipode. Zhur. ob. khim. 27 no.3:742-748 Mr '57. (MLRA 10:6)

1. Institut biologicheskoy i meditsinskoy khimii Akademii meditsinskikh nauk SSSR.

(Sarkomycin)

AUTHORS: Maymind, V. I., Yenisherlova, O. M., Yermolayev, K. M., Vdovina, R. G., Galegov, G. A., Shemyakin, M. M. SOV/79-28-8-46/66

TITLE: Investigations Concerning Compounds With Radioactive C^{14} and N^{15} (Issledovaniya v oblasti soyedineniy, mechennykh C^{14} i N^{15}) IX.Synthesis of the ω -N^{15}-Amino Acids (IX.Sintez ω -N^{15}-amino-kislot)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol. 28, Nr 8, pp. 2223 - 2228 (USSR)

ABSTRACT: These investigations showed that the phthalimide method used previously by the authors for the synthesis of various α-N^{15}-amino acids (Ref 2) is also of value for synthesizing the ω-N^{15}-amino acids. The results of investigations on the conditions and reactions to be used for the synthesis of ε-N^{15}-lysine and δ-N^{15}-ornithine are reported. The authors departed from the syntheses described in publications in trying at first to carry out the synthesis by condensing poatassium N^{15}-phthalimide with 5-(6-bromobutyl) hydantoin (Ref 5). However, only half of the synthesized lysine, obtained

Card 1/3

in 50% yield, contained the radioactive nitrogen. It was obvious from a theoretical view-point that the undesired reaction may be avoided by substitution of hydrogen in the 3-NH-groups by a radical. To avoid this side reaction 5-(δ-bromobutyl)-3-phenyl hydantoin was condensed with the potassium phthalimide -N^{15}. The former could be synthesized in better yield from ε-oxy-α-aminocaproic acid (Diagram 3), among other acids. The ε-N^{15}-lysine was synthesized by this condensation reaction under the conditions described previously (Ref 2). δ-N^{15}-ornithine was synthesized by the condensation of potassium N^{15}-phthalimide with (γ-bromopropyl)-N-phthaloylaminomalonic ester and with (γ-bromopropyl)-N-acetylaminomalonic ester. Subsequent hydrolysis and decarboxylation of the phthaloyl derivatives led to radioactive ornithine with a yield of 65-70%, calculated on the basis of the potassium N^{15}-phthalimide (tables and reaction scheme). There are 1 table and 13 references, 5 of which are Soviet.

Investigations Concerning Compounds With Radioactive C^{14} and N^{15}. IX. Synthesis of the ω-N^{15}-Amino Acids

SOV/79-28-8-46/66

ASSOCIATION: Institut biologicheskoy i meditsinskoy khimii Akademii meditsinskikh nauk SSSR (Institute of Biological and Medical Chemistry of the Academy of Medical Sciences - USSR)

SUBMITTED: June 28, 1957

Card 3/3

MAYMIND, V.I.; TOKAREV, B.V.; VDOVINA, R.G.; SHEMYAKIN, A.A.

Synthesis of radioactive prussic acid. Khim.i med. no.11:45-52 '59. (MIRA 13:6)

(HYDROCYANIC ACID)

VDovina, R.G.

77077
SOV/62-59-12-21/43

5.3400,5.3500,5.3610

AUTHORS: Shemyakin, M. M., Ravdel', G. A., Chuman, E. S., Shvetsov, Yu. B., Vinogradova, E. I., Vdovina, R. G., Tereshkyev, K. N., Bamdas, E. M.

TITLE: Studies in the Field of Sarcomycine and Its Analogs. Communication 4. Study of Synthetic Routes to Sarcomycine and Its Analogs

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 12, pp 2177-2187 (USSR)

ABSTRACT: 2-Methylcyclopentan-3-one-1,1-dicarboxylic acid (III) was used for the preparation of (Sarcomycine) 2-methylene-cyclopentanone-3-carboxylic acid (I). (III) was assumed to be converted into (I) by bromination. It seemed possible to synthesize (I) from (V) by removal of HBr and by decarboxylation. Diacid (V) could not be obtained because elimination of HBr from (IV) and simultaneous decarboxylation formed (VI) with an endocyclic double bond.

Card 1/10

ASSOCIATION: Institute of Biological and Medical Chemistry, Academy of Medical Sciences (Institut biologicheskiy i meditsinskoy khimii Akademii meditsinskikh nauk)

SUBMITTED: April 12, 1958; Additions made, December 28, 1958

Card 10/10

SOV/79-29-1-74/74

AUTHORS: Shchukina, L. A., Kara-Murza, S. N., Vdovina, R. G.

TITLE: Synthesis of O-Peptides With Help of N,N'-Dicyclohexyl Carbodiimide (Sintez O-peptidov s pomoshch'yu N,N'-ditsiklogeksilkarbodiimida)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 1, p 340 (USSR)

ABSTRACT: The synthesis of O-peptides of β-oxy-α-amino acids is of great interest as such compounds are biochemically of great importance. In many cases they are difficult to synthesize. The authors succeeded in bringing about a simple synthesis of O-peptides which owes its existence to N,N'-dicyclohexyl carbodiimide in the condensation of esters of the N-acylated oxyamino acids with N-acylamino acids. The reaction proceeds in the presence of pyridine in acetone (or in other organic solvents) at 20° in the course of 24 hours. Thus, the following products were obtained: 1) From the ethyl ester of N-benzoyl-seryl glycine and carbobenzoxyl leucyl the ethyl ester of O-carbobenzoyl leucyl-N-benzoyl-seryl glycine (yield: 84%). 2) From the ethyl ester of N-benzoyl-seryl glycine and carbobenzoxy-phenyl alanine of the ethyl ester of O-carbobenzoxy

Card 1/2

Synthesis of O-Peptides With Help of N,N'-Dicyclohexyl Carbodiimide

phenyl alanyl-N-benzoyl-seryl glycine (yield: 82%). Apart from this under similar conditions from the amide of salicyclic acid and carbobenzoxy-phenyl alanine the amide of O-carbobenzoxy-phenyl analyl salicylic acid were obtained (yield 85%). There is 1 reference.

ASSOCIATION: Institut biologicheskoy i meditsinskoy khimii Akademii meditsinskikh nauk SSSR (Institute for Biological and Medical Chemistry of the Academy of Medical Sciences, USSR)

SUBMITTED: September 1, 1958

VDOVINA, R.G.; ALEKSEYEV, I.V.; TRIFONOVA, Zh.P.; KARPOVA, A.V.

Synthesis of B-2-methyl-1,2-bis-(β-pyridyl)-1-propanone, a pyridine analog of amphenone. Zhur.prikl.khim. 38 no.11:2607-2609 N '65. (MIRA 19:1)

1. Institut biologicheskoy i meditsinskoy khimii AMN SSSR, Moskva. Submitted September 17, 1963.

SHCHUKINA, L.A.; VDOVINA, R.G.; SHVETSOV, Yu.B.; KARPOVA, A.V.

Preparative method of production of L- and D-α-hydroxyisovaleric acid. Izv. AN SSSR Otd.khim.nauk no.2:310-312 F '62. (MIRA 15:2)

1. Institut khimii prirodnykh soyedineniy AN SSSR i Institut biologicheskoy i meditsinskoy khimii AMN SSSR.
(Isovaleric acid)

LIBIKH, S.F.,; MATUZOV, N.I.,; VDOVINA, V.Ye.

Experience in using the scotometric method in physiclogical and hygienic research. Gig. i san. 21 no.2:48-52 F '56. (MLRA 9:6)

1. Iz kafedry voyenno-morskoy gigiyeny Voyenno-morskoy meditsinskoy akademii.

(VISION
scotometry in indust. hygiene)
(INDUSTRIAL HYGIENE
scotometry)

VDOVYKIN, G.P.

Some results of the study of mineral composition of 12 carbon-containing meteorites. Meteoritika no.25:134-155 '64. (MIRA 17:9)

VDOVYKIN, G.P.

Some data on the recent development of stagnant troughs in the Mangyshlak Peninsula (trans-Caspian region). Vest. Mosk. un. Ser. 4: Geol. 19 no.3:61-66 My-Je '64. (MIRA 17:12)

1. Kafedra geologii i geokhimii goryuchikh iskopayemykh Moskovskogo universiteta.

VDOVITSIN, S. P., brigadir, Geroy Sotsialisticheskogo Truda

Each member of the crew has mastered two or three skills. Transp. stroi. 13 no.4:42-43 Ap '63. (MIRA 16:4)

1. Kompleksnaya brigada montazhnikov mostovogo otryada No. 5 ordena Lenina Mostostroitel'nogo tresta No. 2.

(Bridge construction)
(Precast concrete construction)

TSUKER, M.B.; LESHCHINSKAYA, Ye.V.; GURARIY, R.M.; VDOVKINA, T.I. (Moskva)

Clinical characteristics of epidemic serous meningitis in the Maritime Territory. Klin.med. 38 no.3:40-46 Mr'60. (MIRA 16:7)

1. Iz Instituta po izucheniyu poliomiyelita AMN SSSR i Primorskogo krayevogo otdela zdravookhraneniya.
(MARITIME TERRITORY—MENINGITIS)

L 05631-67 EWT(l)/EWT(m)/T/EWP(t)/ETI IJP(c) JD/GG

ACC NR: AP6024505 SOURCE CODE: UR/0181/66/008/007/2258/2260

AUTHOR: Baryshev, N. S.; Vdovkina, Ye. Ye.; Martynovich, A. P.; Nesmelova, I. M.; Tsitsina, N. P.; Aver'yanov, I. S.

ORG: none

TITLE: Deep energy levels in indium antimonide

SOURCE: Fizika tverdogo tela, v. 8, no. 7, 1966, 2258-2260

TOPIC TAGS: indium compound, antimonide, impurity level, forbidden band, Hall effect, carrier density, carrier lifetime, photoconductivity, photoelectromagnetic effect

ABSTRACT: The authors have investigated certain electric properties of single crystals of InSb with uncompensated-impurity density 10^{12} - 10^{16} cm^{-3}. The positions of the deep levels in the forbidden band were determined, the concentrations of the corresponding centers obtained, and their recombination properties investigated. The test consisted of measuring the Hall effect and the conductivity in p-type crystals grown by the Czochralski method and doped with germanium, or else obtained by multiple zone melting, in the interval 55 - 300K. The temperature dependence of the Hall coefficient shows, for samples with uncompensated-acceptor density lower than 10^{14} cm^{-3}, the presence of two regions of quenching (below the Hall inversion point and at low temperatures) and a sloping region between them. The results are explained by assuming the existence of three levels (shallow donor and acceptor levels and a deep dononr level), the degree of illing of which depends on the temperature. To observe

Card 1/2

L 05631-67

ACC NR: AF6024505

the deep levels, the transmission of several samples with carrier density $n \lesssim 10^{14}$ cm^{-3} was investigated at 55 and 77K in the spectral interval 5 - 15 μ. A weak absorption band was observed near 9.3 μ, and it is attributed to the ionization of the deep levels. Measurements of the stationary photoelectromagnetic effect and the photoconductivity were used also to investigate the temperature dependence of the lifetime of the carriers, and the results obtained agreed with the published data. The authors thank K. Ya. Shtivel'man for a useful discussion. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: 23Nov65/ ORIG REF: 004/ OTH REF: 007

Card 2/2

VDOVTSEVA, T.A.

Characteristics of pollen tube production when crossing peach with plum. Agrobiologiia no.2:133-136 Mr-Ap '58. (MIRA 11:4)

1. Plodovo-yagodnyy institut imeni R.R. Shredera AN Uzbekskoy SSR. (Peach breeding) (Plum breeding) (Pollen)

VDOVTSEVA, T. A.

Vdovtseva, T. A. — "Methods of Raising Frost-Resisting Varieties of Peach Via Sexual and Vegetative Hybridization." Min Higher Education USSR, Central Asiatic State U, 1955 (Dissertation for Degree of Candidate of Biological Sciences).

SO: Knizhnaya Letopis', No. 23, Moscow, June, 1955, pp. 87-104.

VDOVTSOVA, YE. A.

Feb 49

USSR/ Chemistry- Alkylation
Chemistry- Benzene

"Alkylation of Benzene in the Presence of HSO_4AlCl_2*," N. G. Sidorova, Ye. A. Vdovtsova, Lab org Chem, Cen Asia State U, 5 pp

"Zhur Obshch Khim" Vol XIX , No 2 p 337

Studied alkylation of benzene by olefins, halogen derivatives, and alcohols in presence of HSO_4AlCl_2. Showed that condenstaion proceeds well with olefins (yield of alkylation products 78-86% of theoretical) and halogen derivatives (yield of 60-83% of theoretical). Reaction with alcohols is poor: primary alcohols do not yield to alkylation, secondary ones yield poorly (5% yield), while tertiary produce up to 50% of the yield of alkylbenzenes. Para-isomers form during alkylation in presence of HSO_4AlCl_2. HSO_4AlCl_2 causes partial isomerization of radicals. Submitted 29 Oct 47.

* aluminum dichloride acid sulfate.

PA 46/49T15

VDOVTSOVA, E.A.

USSR.

Radical and ionic mechanisms of alkylation reactions of aromatic compounds. E. A. Vdovtsova and I. P. Tsukervanik. *Doklady Akad. Nauk S.S.S.R.* 80, 61-4(1951); cf. preceding abstr.—Expts. were carried out to establish conditions for alkylation of the aromatic nucleus by a radical mechanism. Conditions are described for prepg. mixed aluminum organic compds. with BuI and Me_2CHI ($RAlI_2$ and R_2AlI). These compds. can then act as alkylation reagents. The compds. $PhAlI_2$ and $PhAlCl_2$ were also prepd. and condensed with Me_2CHI, BuI, Me_2CHCH_2I, $Me_2CHCH_2CH_2I$, Me_2CCH_2I, BuCl, and $PhCH_2Cl$. J. R. L.

VDOVTSOVA, E. A.

USSR

Radical and ionic mechanism of reactions of alkylation of aromatic compounds. E. A. Vdovtsova and L. P. Tyuker-vanik. (Central Asia State Univ., Tashkent). *Sbornik Statei Obshchei Khim.* 2, 1027-34(1953); cf. following abstr. —Alkylation of aromatic compds. in the presence of $AlCl_3$ is at times accompanied by unusual reactions (dimerization, reduction of halides) which are interpretable by radical reactions. Depending on the expti. conditions, alkylations in the presence of Al can occur either ionically or by a radical route. Al shavings treated with iso-$PrAlI_2$ + $(iso\text{-}Pr)_2AlI$, prepd. separately in a test tube, undergo an exothermic reaction and after 2 hrs. stirring, during which iso-PrI was added, the resulting mixt. was used for alkylation expts. A similar reagent of $BuAlI_2$ + Bu_2AlI was prepd. at 55-65°. Reactions of these mixts. with C_6H_6, PhBr, MePh, and PhCl were run at (80-110°, yielding 23-41% monoalkyl derivs. and small amts. of dialkyl derivs. (from C_6H_6 and MePh). These products could only result from a radical-type fission of the C-Al link, since nucleophilic substitutions in the benzene series are not usual. The reagent prepd. from 36.8 g. BuI and 3.0 g. Al with 20 g. BzPh at 80° (exothermic reaction) gave Ph_2CH_2, indicating that reduction was the principal reaction of the resulting free radicals. The reaction of $PhAlI_2$ with EtI, iso-PrI, BuI, BuBr, BuCl, iso-BuI, Et_2CHI, *tert*-AmI, and BzCl was exaind. at 0-90°; this resulted in 23-72% yields of the corresponding monoalkylbenzenes and 12-43% dialkylbenzenes. The alkylation products are usually mixts. contg. secondary and n-alkyl derivs.

G. M. K.

VdovTsova, E. A.

USSR/Chemistry - Metalorganic compounds

Card 1/1 : Pub. 151 - 32/37

Authors : Vdovtsova, E. A., and Tsukervanik, I. P.

Title : Condensation of phenylaluminum diiodides with aromatic halogen derivatives

Periodical : Zhur. ob. khim. 24/3, 558-561, Mar 1954

Abstract : Investigation was conducted to determine the mechanism of condensation of phenylaluminum diiodide with bromobenzene, p-chlorotoluene and p-bromotoluene. The optimum conditions favorable for the derivation of large yields of diphenyl during the reaction of $C_6H_5AlJ_2$ with bromobenzene were determined. The characteristics of the secondary products (terphenyl, quaterphenyl and quinquiphenyl) obtained during the above mentioned reaction are described. Diphenyl was found to be the basic product of $C_6H_5AlJ_2$ condensation with p-chloro-and p-bromotoluene. The radical mechanism of the reaction between $C_6H_5AlJ_2$ and aryl halides is explained. Eight references: 6-USSR; 1-USA and 1-German (1880-1953). Tables.

Institution : Central Asiatic State University

Submitted : September 5, 1953

PA - 3152

AUTHOR VDOVTSOVA YE.A., ZAVGORODNIY S.V.

TITLE Alkylation of Aromatic Compounds By Diene Hydrocarbons.Alkenylation of Anisole By Piperylene.
(Alkilirovaniye aromaticheskikh soyedineniy diyenovymi uglevodorodami. Alkenilirovaniye anizola piperilenom. -Russian)

PERIODICAL Doklady Akademii Nauk SSSR,1957,Vol 113,Nr 3,pp 590-593 (U.S.S.R.)

Received 6/1957 Reviewed 7/1957

ABSTRACT A systematic investigation of the reaction on the occasion of the alkylation of the aromatic core with pyperilene (a by-product obtained when producing synthetic rubber by the Lebedev method) was carried out for the purpose of determining the reactivity of pierylene from a double-functional combination. By the example of anisol it is shown to be possible to alkylize the aromatic core with piperylene, viz. with a yield of 56 - 92% of the theoretical quantities of pentenil anisole. The anisole was selected as the first experimental object because it represents those substances which have a sufficient amount of movable hydrogens in order in this way to avoid the use of energetic catalyzers and thus also a polymerization of the pierylene. Molecular compounds of boron fluoride were tried out as catalyzers. With all these catalyzers the alkylation process suppresses the polymerization of the pierylene. Results are shown together in form of a table. The structure of the pentenile anisoles was proved. Pentenilanisole was obtained in the presence of $BF_3.O(C_2H_5)_2$ and is in

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Alkylation of Aromatic Compounds By Diene Hydrocarbons. PA - 3152
Alkenylation of Anisole By Piperylene.

its basic mass a 4-(n-methoxyphanyl)-penten-2(XI) which is mentioned in publications as an intermediate product in the synthesis 2,3-to-(n-oxyphenyl)-pentane. The products obtained by alkylation in the presence of BF_3, H_3PO_4, $BF_3 \cdot H_3PO_4$ apparently consist essentially of 4-(n-methoxyphenyl)-penten-2. The experiments are described.
(With 1 table and 7 Slavic references).

ASSOCIATION State University of Voronesh
PRESENTED BY TOPCHIYEV A.V., Member of the Academy
SUBMITTED 15.11.1956
AVAILABLE Library of Congress
Card 2/2

VDOVTSOVA, Ye.A.

Alkylation of aromatic compounds by diene hydrocarbons. Part 10: Alkylation of anisole by isoprene in the presence of orthophosphoric acid. Zhur. org. khim. 1 no. 12:2192-2202 D '65 (MIRA 19:1)

1. Institut khimii rastitel'nykh veshchestv AN UzSSR. Submitted July 6, 1964.

VDOVTSOVA, Ye.A.

Alkylation of aromatic compounds with diene hydrocarbons. Part 9: Alkylation of phenetole with piperylene in the presence of $BF_3 \cdot H_3PO_4$. Zhur.ob.khim. 33 no.12:3911-3917 D '63. (MIRA 17:3)

1. Institut khimii rastitel'nykh veshchestv AN Uzbekskoy SSR.

VDOVTSOVA, Ye.A.; POPOVA, G.I.

Alkylation of aromatic compounds with diene hydrocarbons. Part 8: Synthesis of 2,3-bis(p-methoxyphenyl)pentane. Zhur.ob.khim. 33 no.6:1870-1874 Je '63. (MIRA 16:7)

1. Voronezhskiy gosudarstvennyy universitet.
(Pentane) (Piperylene)

VDOVTSOVA, Ye.A.; YAGUDAYEV, M.R.

Alkylation of aromatic compounds with diene hydrocarbons. Part 5: Products of alkylation of phenetole with piperylene in the presence of anhydrous orthophosphoric acid. Uzb.khim.zhur. 6 no.6:37-48 '62. (MIRA 16:2)

1. Institut khimii rastitel'nykh veshchestv AN UzSSR.
(Phenetole) (Piperylene)

VDOVTSOVA, Ye.A.; Prinimal uchastiye: YAGUDAYEV, M.R.

Alkylation of aromatic compounds by diene hydrocarbons. Part 7: Alkenylation of phenetole by piperylene in the presence of ethyl etherate of boron fluoride. Uzb.khim.zhur. 7 no.1:50-56 '63. (MIRA 16:4)

1. Institut khimii rastitel'nykh veshchestv AN UzSSR.
(Phenetole) (Piperylene)

VDOVTSOVA, Ye.A.; ALEKSYUK, M.A.

Alkylation of aromatic compounds by diene hydrocarbons. Part 4: Alkenylation of phenethyl alcohol b piperylene in the presence of ahydrous orthophosphoric acid. Zhur.ob.khim. 32 no.5:1494-1498 My '62. (MIRA 15:5)

1. Voronezhskiy gosudarstvennyy universitet.
(Phenethyl alcohol) (Piperylene)

YAGUDAYEV, M.R., UDOVTSOVA, Ye.A.

Alkylation of aromatic compounds with diene hydrocarbons. Part 6: Spectral investigation of products of alkenylation of phenetole with piperylene in the presence of anhydrous orthophosphoric acid. Zhur. ob.khim. 32 no.7:2184-2190 Jl '62. (MIRA 15:7)

1. Institut khimii rastitel'nykh veshchestv AN Uzbekskoy SSR.
(Phenetole) (Piperylene)

VDOVTSOVA, Ye.A.

Alkylation of aromatic compounds by diene hydrocarbons. Part 1: Alkenylation of anisole by piperylene in the presence of boron fluoride ethyl etherate. Zhur. ob. khim. 31 no.1:95-102 Ja '61. (MIRA 14:1)

1. Voronezhskiy gosudarstvennyy universitet.
(Anisole) (Piperylene)

VDOVTSOVA, Ye.A.; ROMANIKHIM, A.M.

Alkylation of aromatic compounds by diene hydrocarbons. Part 3: Alkenylation of phenol by piperylene in the presence of anhydrous orthophosphoric acid. Zhur. ob. khim. 31 no. 2:479-484 F '61. (MIRA 14:2)

1. Voronezhskiy gosudarstvennyy universitet.
(Phenol) (Piperylene)

VDOVTSOVA, Ye.L.; POPOVA, G.I.

Synthesis of 2,3-bis(p-methoxyphenyl)pentane. Zhur. VKHO 5 no.4: 470 '60. (MIRA 13:12)

1. Voronezhskiy gosudarstvennyy universitet.
(Pentane)

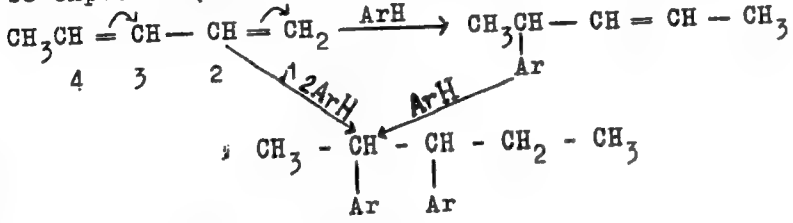
S/079/61/031/001/008/025
B001/B066

AUTHOR: Ydovtsova, Ye. A.

TITLE: Alkylation of Aromatic Compounds With Diene Hydrocarbons. I. Alkenylation of Anisole With Piperylene in the Presence of the Ethyl Etherate of Boron Fluoride

PERIODICAL: Zhurnal obshchey khimii, 1961, Vol. 31, No. 1, pp. 95 - 102

TEXT: The author thoroughly studied the alkylations of aromatic compounds with pentadiene-1,3 (piperylene). The latter being a bifunctional compound, either a stepwise reaction, or only the formation of an end product was to be expected (Ref. 4):



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Alkylation of Aromatic Compounds With Diene Hydrocarbons. I. Alkenylation of Anisole With Piperylene in the Presence of the Ethyl Etherate of Boron Fluoride

S/079/61/031/001/008/025
B001/B066

Theoretically, six products were expected to be formed; two of them, (I) and (III), have the same structure:
$CH_3 - CH(Ar) - CH = CH - CH_3$ (I), $CH_3 - CH_2 - CH = CH - CH_2 - Ar$ (II),
$CH_3 - CH = CH - CH(Ar) - CH_3$ (III), $CH_3 - CH = CH - CH_2 - CH_2 - Ar$ (IV),
$CH_3 - CH(Ar) - CH_2 - CH = CH_2$ (V), $CH_3 - CH_2 - CH(Ar) - CH = CH_2$ (VI)
(Ref. 5). The assumption that the stepwise reaction in the presence of acid catalysts, with addition at the 1,4-position, i. e., with formation of compound (I), be most presumable (Ref. 2), was confirmed (Ref. 6). The present paper describes the alkenylation of anisole with pentadiene-1,3 in the presence of $BF_3 \cdot O(C_2H_5)_2$. A large quantity of high-boiling products is formed in this reaction, so that the pentenyl anisole yields were 62 % at the most. Alkenylation is best carried out at a temperature between 0 and 20°C. At a prolonged reaction period, the yield is considerably affected by the dilution of pentadiene-1,3 with high anisole excess (3.5 - 4 moles). Separation of the isomers of pentenyl anisole by frac-

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Alkylation of Aromatic Compounds With Diene Hydrocarbons. I. Alkenylation of Anisole With Piperylene in the Presence of the Ethyl Etherate of Boron Fluoride

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B001/B066

tional distillation was not possible, hence all fractions separated were studied. The structure of pentenyl anisole was confirmed by oxidation, bromination, and counter-synthesis. p-methoxy-hydratropic acid (IX), p-methoxy-acetophenone (X), and a little acetic acid resulted in good yields from its oxidation with potassium permanganate. Oxidation with 5 % potassium permanganate solution gave a mixture of anisic acid and p-methoxy-benzoyl formic acid (XI). The reaction of anisole with piperylene in the presence of $BF_3 \cdot O(C_2H_5)_2$ thus takes place according to the polarity of piperylene (most probably in the 1,4-position (I)). Depending on conditions and oxidizing agent, all oxidation intermediates up to anisic acid, inclusively, were obtained. There are 2 tables and 16 references: 12 Soviet, 3 US, and 1 French.

ASSOCIATION: Voronezhskiy gosudarstvennyy universitet (Voronezh State University)

SUBMITTED: October 27, 1959

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S/079/61/031/001/009/025
B001/B066

AUTHOR: Vdovtsova, Ye. A.

TITLE: Alkylation of Aromatic Compounds With Diene Hydrocarbons. II. Alkenylation of Anisole With Piperylene in the Presence of Boron Fluoride, Aluminum Chloride, and Their Orthophosphoric Acid Compounds

PERIODICAL: Zhurnal obshchey khimii, 1961, Vol. 31, No. 1, pp. 102 - 108

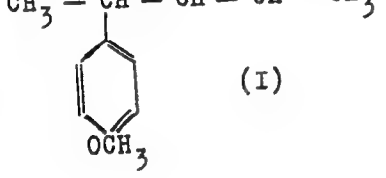
TEXT: The alkenylation of anisole with piperylene by means of $BF_3 \cdot O(C_2H_5)_2$ carried out by the author in Ref. 1 gave pentenyl anisole in a maximum yield of 62 %. It was the purpose of the present work to obtain higher yields in this reaction. Alkenylation was made in the presence of BF_3, $AlCl_3$, anhydrous orthophosphoric acid, $BF_3 \cdot H_3PO_4$, and $AlCl_2 \cdot HPO_4$ as suggested in one of the US patents (Ref. 3). The author was able to carry out the alkenylation of the aromatic ring with all these catalysts. The best results were obtained with anhydrous orthophosphoric acid; this mild catalyst

Alkylation of Aromatic Compounds With Diene Hydrocarbons. II. Alkenylation of Anisole With Piperylene in the Presence of Boron Fluoride, Aluminum Chloride, and Their Orthophosphoric Acid Compounds

did not form any by-products and gave good yields, irrespective of the reaction conditions. Higher yields than those with $BF_3 \cdot O(C_2H_5)_2$ were also obtained with active catalysts such as $BF_3 \cdot H_3PO_4$, BF_3, $AlCl_3$. Considerable quantities of high-boiling products were obtained with BF_3. The more active catalyst requires milder reaction conditions (smaller quantity of the catalyst, higher dilution, shorter time of reaction). If, for instance, the yield of the end product is 56 - 59 %, when using $BF_3 \cdot O(C_2H_5)_2$ and a dilution of 1 : 4, and little depends on the catalyst quantity between 0.1 and 0.3 mole, an increase of the orthophosphoric acid addition from 0.1 to 0.25 mole increases the yield up to 92 %. The best yields (up to 84 %) of pentenyl anisole with $BF_3 \cdot H_3PO_4$ are obtained only by simultaneous increase of the catalyst quantity and higher dilution. Also the reaction time considerably affects the yield of pentenyl anisole. The structure of pentenyl anisole was confirmed by bromination of the fractions obtained

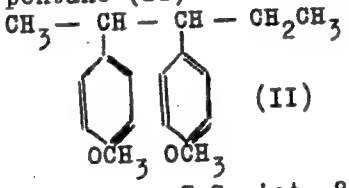
Alkylation of Aromatic Compounds With Diene Hydrocarbons. II. Alkenylation of Anisole With Piperylene in the Presence of Boron Fluoride, Aluminum Chloride, and Their Orthophosphoric Acid Compounds

on fractional distillation of the principal product, and by identification of the crystalline 2,3-dibromo-(p-methoxy-phenyl)-pentane. 4-(p-methoxy-phenyl)pentene-2 (I) is the principal product in the alkenylation with all catalysts studied:



(I)

The presence of this compound is confirmed by its conversion to 2,3-bis-(p-methoxy-phenyl) pentane (II):



(II)

There are 3 tables and 16 references: 7 Soviet, 8 US, 1 French, and 2 Japanese.

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Alkylation of Aromatic Compounds With Diene Hydrocarbons. II. Alkenylation of Anisole With Piperylene in the Presence of Boron Fluoride, Aluminum Chloride, and Their Orthophosphoric Acid Compounds

S/079/61/031/001/009/025
B001/B066

ASSOCIATION: Voronezhskiy gosudarstvennyy universitet (Voronezh State University)

SUBMITTED: October 27, 1959

Card 4/4

VDOVTSOVA, Ye.A., kandidat khimicheskikh nauk; TSUKERVANIK, I.P., professor, otvetstvennyy redaktor; SARYMSAKOV, T.A., glavnyy redaktor; RYZHOV, S.N., professor-doktor, zamestitel' glavnogo redaktora; ROMANOVSKIY, V.I., redaktor; KOROVIN, Ye.P., redaktor; MASSON, M.Ye., redaktor; KORZHENEVSKIY, N.L., redaktor; POPOV, V.I., professor-doktor, redaktor; MIROSHKINA, N.M., professor, redaktor; STOLYAROV, D.D., dotsent, redaktor; BONDAREVSKIY, G.L., dotsent, redaktor; KRASNOVAYEV, I.M., dotsent, redaktor; GENTSHKE, L.V., dotsent, redaktor

[Radical and ionic alkylation of aromatic compounds] Radikal'nyi i ionnyi mekhanizmy reaktsii alkilirovaniia aromaticheskikh soedenenii. Erevan, Izd-vo Erevanskogo universiteta, 1953. 92 p. (Tashkent. Universitet. Trudy Sredneaziatskogo gosudarstvennogo universiteta. no.43. Khimicheskie nauki, no.6)

1. Deystvitel'nyy chlen Akademii nauk UzSSR (for Sarymsakov, Romanovskiy, Korovin). 2. Deystvitel'nyy chlen Akademii nauk Turkm. SSR (for Masson). 3. Chlen-korrespondent Akademii nauk UzSSR (for TSukervanik, Korzhenevskiy).

(Arotmatic compounds) (Alkylation)

VDOVYKA, V.I., sanitarnyy instruktor

Technic of mass investigations of the transmission of dysentery and typhoid and paratyphoid infections. Fel'd. i akush. 25 no.4:52-54 Ap '60. (MIRA 14:5)

(DYSENTERY—BACTERIOLOGY) (TYPHOID FEVER—BACTERIOLOGY)
(PARATYPHOID FEVER—BACTERIOLOGY)

VERNADSKIY, A.F., [illegible]

Study of the rare-earth content of meteorites using the method of the super-fast electron [illegible]. Geokhimiia no.4: 387-389 Ap '65. (MIRA 18:7)

1. Institut geokhimii i analiticheskoy khimii imeni Vernadskogo AN SSSR i Institut geokhimii i petrografii, petrografii, mineralogii i geokhimii AN [illegible].

S/0007/64/000/004/0299/0306

ACCESSION NR: AP4033421

AUTHOR: Vdovykin, G. P.

TITLE: Carbonaceous matter of meteorites in connection with their origin

SOURCE: Geokhimiya, no. 4, 1964, 299-306

TOPIC TAGS: meteorite, carbon, chondrite

ABSTRACT: In studying the carbonaceous material from several kinds of meteorites, the author has identified coaly matter, graphite, diamond, and several other carbon-bearing constituents, particularly organic compounds: aromatic acids, phenols, amino acids, and carbohydrates. In carbonaceous chondrites, the high content of carbonaceous material, which may give the meteorite a content of C as great as 4.6%, accounts for the dark color of the chondrite. The microscope shows this material to be opaque, with a clumpy structure and a black color with brown tone. Thin sections may show a brownish green color, apparently due to an admixture of chlorite-serpentine minerals. The coaly matter itself consists of bituminous components, found in different kinds of meteorites, of high-molecular organic matter and black carbon, in which the carbon atoms have some order. The

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